Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A variable speed air handling system for heating and/or cooling a room, the system comprising:

a fan assembly to transport air from the system into the room, the fan assembly having a substantially continuously adjustable speed within a range of speeds defined by a predetermined upper limit and a predetermined lower limit;

a user interface to transmit a signal in response to a desired speed of the fan assembly input by an operator via the user interface;

a control unit for substantially continuously adjusting the speed of the fan assembly to a speed in the range of speeds in response to the signal transmitted by the user interface; ~~and~~

a climate control unit for heating and/or cooling the air to be transported from the air conditioner by the fan assembly;

a heat exchanger in thermal communication with the climate control unit; and

a frost sensor to detect the accumulation of frost on a surface of the heat exchanger, wherein the climate

control unit is deactivated in response to a signal transmitted by the frost sensor.

Claim 2 (original): The variable speed air conditioner according to claim 1 further comprising a display portion to display a visual indication of an approximate speed of the fan assembly relative to the predetermined upper and lower limits.

Claim 3 (original): The variable speed air handling system according to claim 2, wherein the visual indication displayed by the display portion is an integer value representing a speed of the fan assembly that most closely represents an actual speed of the fan assembly.

Claims 4-5 (canceled)

Claim 6 (original): The variable speed air handling system according to claim 1, wherein the control unit comprises a multi-position switch for defining the predetermined upper and lower limits of the fan assembly speed.

Claim 7 (original): The variable speed air handling system according to claim 1, wherein the user interface is a remote device for communicating an operator input instruction to the control unit via a wireless communication link.

Claim 8 (original): The variable speed air handling system according to claim 7, wherein the wireless communication link is one of a group consisting of a radio frequency communication link and an infrared communication link.

Claim 9 (original): The variable speed air handling system according to claim 1 further comprising a visual indicator to identify a currently selected operational mode.

Claim 10 (original): The variable speed air handling system according to claim 1, wherein the control unit modulates an amplitude of a sinusoidal voltage waveform supplied to the fan assembly to substantially continuously adjust the speed of the fan assembly.

Claim 11 (original): The variable speed air handling system according to claim 1, wherein the user interface comprises fan speed adjustment keys to allow the operator to substantially continuously adjust the speed of the fan assembly manually.

Claim 12 (original): The variable speed air handling system according to claim 1, wherein the speed of the fan assembly is substantially continuously adjusted by limiting an amplitude of a sinusoidal electrical power signal to drive the fan assembly.

Claim 13 (original): The variable speed air handling system according to claim 1, wherein the speed of the fan assembly is substantially continuously adjusted by performing pulse width modulation on a sinusoidal electrical power signal to drive the fan assembly.

Claim 14 (original): The variable speed air handling system according to claim 1, wherein the climate control unit is a refrigeration unit for removing thermal energy from the air to be transported from the system by the fan assembly.

Claim 15 (original): The variable speed air handling system according to claim 1, wherein the control unit increases the speed of the fan assembly when a low supply voltage condition is sensed.

Claim 16 (original): The variable speed air handling system according to claim 1, wherein following an interruption in a supply voltage, the control unit starts the fan assembly and then waits for a delayed-start period before starting the climate control unit.

Claim 17 (original): The variable speed air handling system according to claim 1, wherein when a low supply voltage condition is sensed, the control unit starts the fan assembly at a higher speed than the desired speed and then subsequently reduces the speed to the desired speed.

Claim 18 (currently amended): A variable speed air handling system for heating and/or cooling a room, the air handling system comprising:

a fan assembly comprising:

a fan motor having a single main stator winding; and

a fan operatively connected to be driven by the fan motor to transport air from the air handling system into the room;

a user interface for inputting at least a desired speed of the fan motor;

a control unit for modulating an electrical power signal delivered to the fan motor to substantially continuously adjust the speed of the fan motor according to the desired speed of the fan motor input via the user interface; ~~and~~

a climate control unit for removing thermal energy from the air to be transported from the air handling system by the fan assembly;

wherein the control unit increases a voltage of the electrical power signal when a low supply voltage condition is sensed.

Claim 19 (original): The variable speed air handling system according to claim 18 further comprising a display portion to display a visual indication of the approximate speed of the fan motor.

Claim 20 (original): The variable speed air handling system according to claim 19, wherein the visual indication displayed by the display portion is an integer value

representing a speed of the fan motor that most closely approximates an actual speed of the fan motor.

Claim 21 (original): The variable speed air handling system according to claim 18 further comprising a heat exchanger in thermal communication with the climate control unit.

Claim 22 (original): The variable speed air handling system according to claim 18 further comprising a frost sensor to detect the accumulation of frost on a surface of a heat exchanger, wherein the climate control unit is deactivated in response to a signal transmitted by the frost sensor.

Claim 23 (original): The variable speed air handling system according to claim 18, wherein the control unit comprises a multi-position switch for defining the predetermined limits of the fan assembly speed.

Claim 24 (original): The variable speed air handling system according to claim 18, wherein the user interface is a remote device for communicating an operator input instruction to the control unit via a wireless communication link.

Claim 25 (original): The variable speed air handling system according to claim 24, wherein the wireless communication link is one of a group consisting of a radio frequency communication link and an infrared communication link.

Claim 26 (original): The variable speed air handling system according to claim 18 further comprising a visual indicator to identify a currently selected operational mode.

Claim 27 (original): The variable speed air handling system according to claim 18, wherein the control unit modulates an amplitude of a sinusoidal voltage waveform supplied to the fan assembly to substantially continuously adjust the speed of the fan assembly.

Claim 28 (original): The variable speed air handling system according to claim 18, wherein the an amplitude of a sinusoidal electrical power signal is limited to drive the fan assembly at the desired speed.

Claim 29 (original): The variable speed air handling system according to claim 18, wherein pulse width modulation of a sinusoidal electrical power signal drives the fan assembly at the desired speed.

Claim 30 (original): The variable speed air handling system according to claim 18, wherein the climate control unit is a refrigeration unit for removing thermal energy from the air to be transported from the system by the fan assembly.

Claim 31 (original): The variable speed air handling system according to claim 18, wherein the control unit increases a voltage of the electrical power signal when a low supply voltage condition is sensed.

Claim 32 (canceled)

Claim 33 (currently amended): The variable speed air handling system according to claim 18, wherein when a low supply voltage condition is sensed, after the control unit ~~sets the electrical power signal to a higher~~ increases the voltage of the electrical power signal, ~~than required to operate the fan motor at the desired speed and~~ the control unit then subsequently reduces the voltage.

Claim 34 (original): A variable speed air handling system for heating and/or cooling a room, the air handling system comprising:

a user interface that transmits a signal in response to a desired operational mode of the air handling system input by an operator via the user interface;

a controller for transmitting a control signal in response to the signal transmitted by the user interface;

a climate control unit for heating and/or cooling air to be discharged from the air handling system into the room;

a heat exchange surface in thermal communication with the climate control unit;

a fan assembly to transport air from an external environment into the room after having thermal energy removed by the climate control unit, the fan having a substantially continuously variable speed; and

a sensor disposed to sense a frost condition on the heat exchange surface, wherein

operation of the climate control unit is prevented for a period of time lasting until the sensor detects the elimination of at least a portion of the frost condition, wherein

the fan is continuously operated during the period of time when operation of the climate control unit is prevented.

Claim 35 (currently amended): A method of controlling a variable speed air handling system to be installed in a window of a room, the air handling system comprising a control unit, a climate control unit, and a fan assembly including a fan motor for driving a fan, the method comprising steps of:

providing a user interface to allow at least a desired operational mode of the air handling system and a desired speed of the fan motor to be input by an operator;

controlling an operation of the climate control unit in response to the desired operational mode input via the user interface; ~~and~~

adjusting a speed of the fan motor in a substantially continuous manner to drive the fan at the desired speed of the fan motor input via the user interface; and

following an interruption in a supply voltage, starting the fan motor and then waiting for a delayed-start period before starting the climate control unit.

Claim 36 (original): The method of controlling a variable speed air handling system according to claim 35 further comprising a step of sensing a temperature of the room by the air handling system.

Claim 37 (original): The method of controlling a variable speed air handling system according to claim 35, wherein the operation of the climate control unit is controlled in response to the desired operational mode input via the user interface and the sensed temperature of the room.

Claim 38 (original): The method of controlling a variable speed air handling system according to claim 35 further comprising a step of displaying a visual indicator corresponding to the desired speed of the fan motor.

Claim 39 (original): The method of controlling a variable speed air handling system according to claim 35 further comprising sensing an accumulation of frost on a surface of a heat exchanger in thermal communication with the climate control unit.

Claim 40 (original): The method of controlling a variable speed air handling system according to claim 39 further comprising a step of deactivating the climate control unit for a period of time in response to sensing the accumulation of frost on the surface of the heat exchanger.

Claim 41 (original): The method of controlling a variable speed air handling system according to claim 40 further comprising a step of operating the fan motor during the period of time when the climate control unit is deactivated.

Claim 42 (original): The method of controlling a variable speed air handling system according to claim 41, wherein the step of adjusting the speed of the fan motor in the substantially continuous manner comprises modulating an amplitude of a sinusoidal voltage waveform supplied to the fan motor to substantially continuously adjust the speed of the fan motor to the desired speed.

Claim 43 (original): The method of controlling a variable speed air handling system according to claim 35, further comprising a step of increasing a voltage of the

control signal when a low supply voltage condition is sensed.

Claim 44 (canceled)

Claim 45 (original): The method of controlling a variable speed air handling system according to claim 35, further comprising a step of before the step of adjusting, providing a higher voltage than required to operate the fan motor at the desired speed.

Claim 46 (original): A refrigeration unit comprising:

a heat exchanger;

a fan for providing air flow to the heat exchanger;

a compressor;

a power supply providing a supply voltage to the compressor; and

a control unit that increases an operating speed of the fan when a low voltage condition of the supply voltage is sensed.

Claim 47 (original): The refrigeration unit of claim 46, wherein following an interruption in the supply voltage, the control unit starts the fan and then waits for a delayed-start period before starting the compressor.

Claim 48 (original): A refrigeration unit comprising:

a heat exchanger;

a fan;

a compressor;

a power supply providing a supply voltage to the fan motor and to the compressor; and

a control unit that, following an interruption in the supply voltage, starts the fan and then waits for a delayed-start period before starting the compressor.

Claim 49 (original): The refrigeration unit of claim 48, wherein when a low voltage condition of the supply voltage is sensed, the control unit starts the fan at a higher speed than the desired fan speed and then subsequently reduces the fan to the desired fan speed.

Claim 50 (original): A refrigeration unit comprising:

a heat exchanger;

a fan;

a compressor;

a power supply providing a supply voltage to the fan motor and to the compressor;

an operator control for setting a desired fan speed; and

a control unit that, when a low voltage condition of the supply voltage is sensed, starts the fan at a higher speed than the desired fan speed and then subsequently reduces the fan to the desired fan speed.